

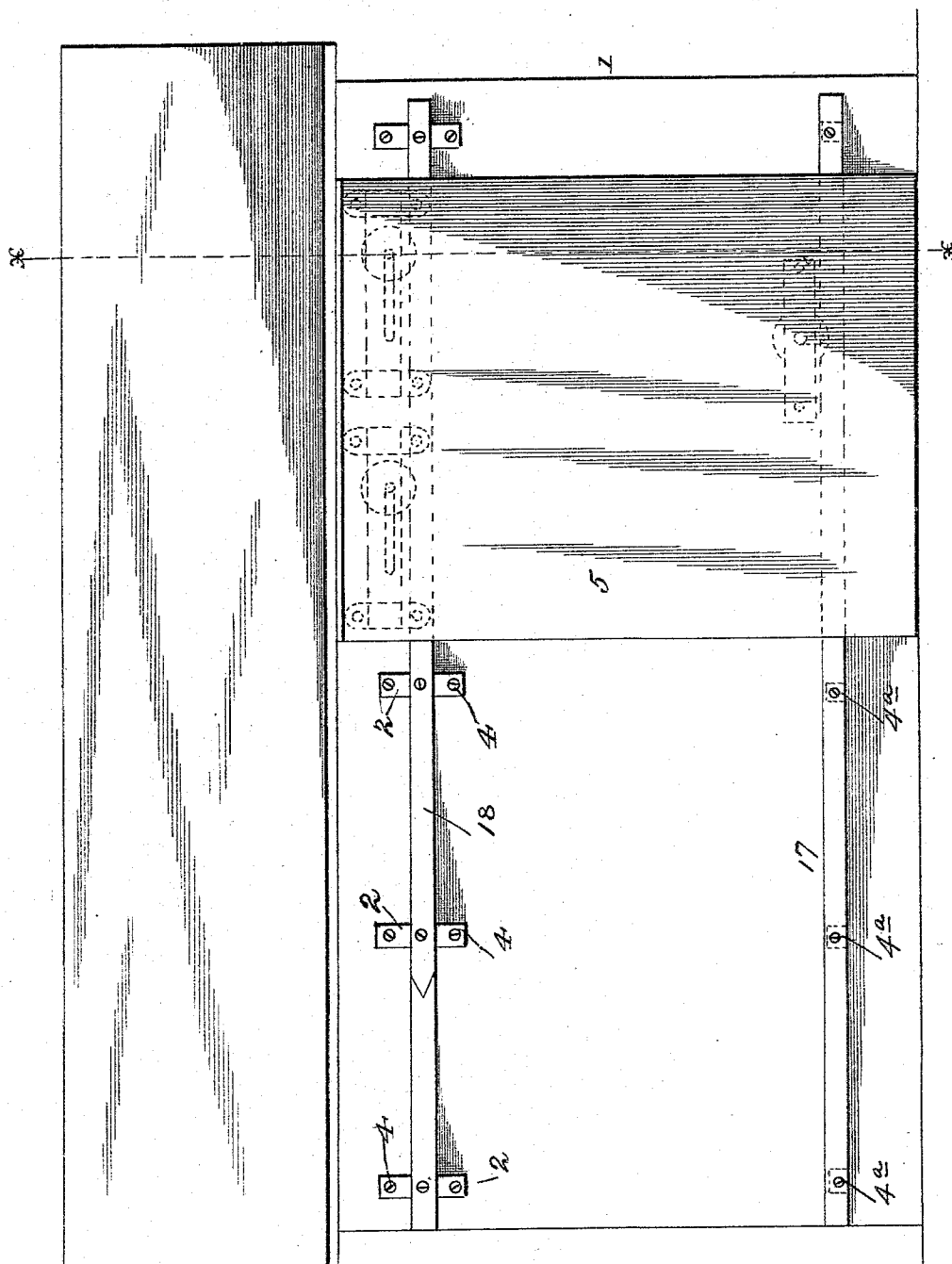
(No Model.)

2 Sheets—Sheet 1.

J. R. BODELL.
SLIDING DOOR.

No. 494,840.

Patented Apr. 4, 1893.



WITNESSES:

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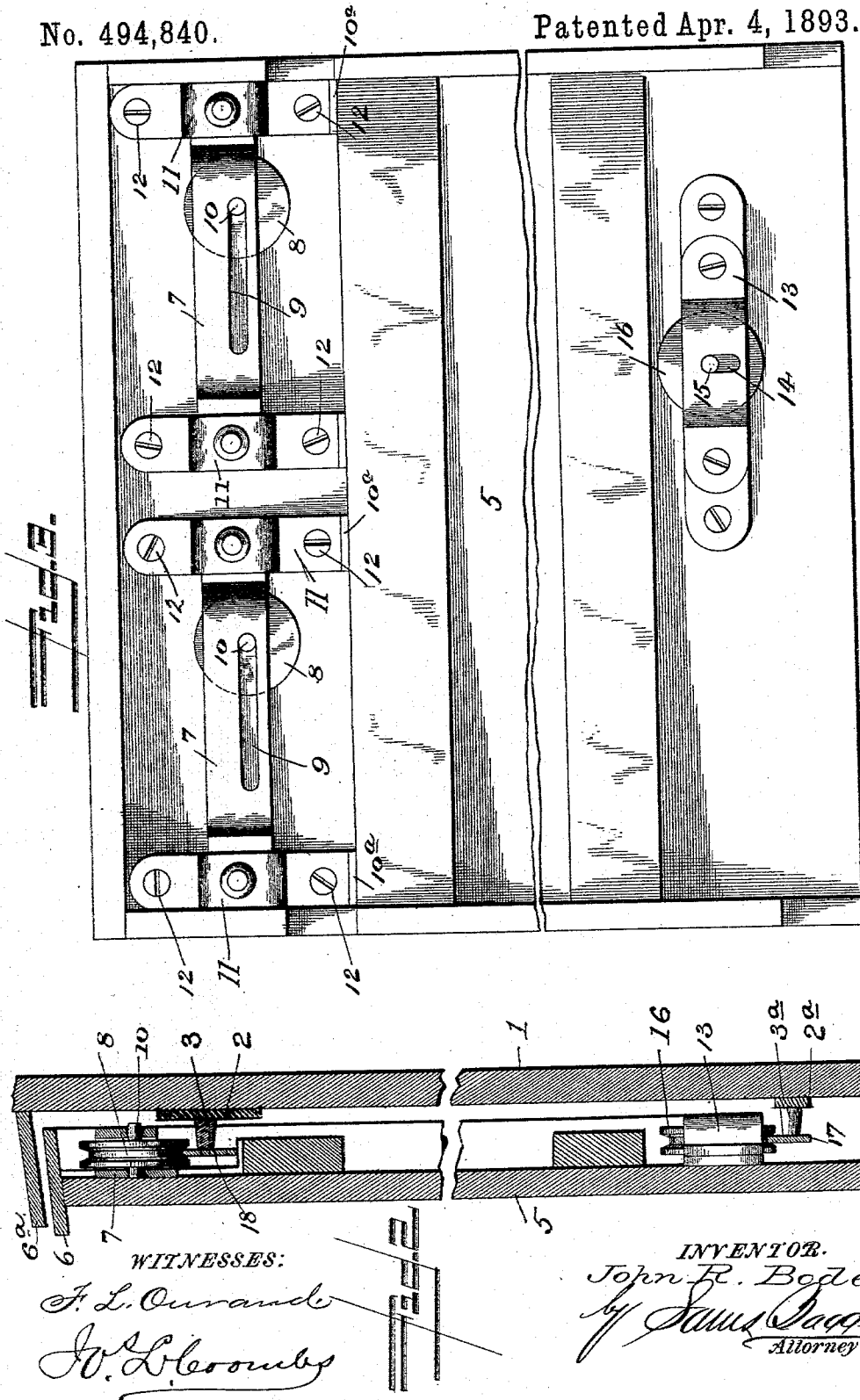
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UNITED STATES PATENT OFFICE.

JOHN R. BODELL, OF NEW SALEM, OHIO, ASSIGNOR OF ONE-HALF TO JOHN BOPES, OF SAME PLACE.

SLIDING DOOR.

SPECIFICATION forming part of Letters Patent No. 494,840, dated April 4, 1893.

Application filed July 15, 1892. Serial No. 440,096. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. BODELL, a citizen of the United States, and a resident of New Salem, in the county of Fairfield and State of Ohio, have invented certain new and useful Improvements in Sliding Doors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to sliding doors, used more particularly for barns, freight cars and the like, the object being to provide an improved construction, whereby I obtain superior advantages with respect to economy, simplicity, and efficiency.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings: Figure 1 is a side elevation of a portion of a barn showing my improved sliding door applied thereto. Fig. 2 is a cross sectional view on the line *x*, *x*, Fig. 1. Fig. 3 is an inner view of the door showing the anti-friction rollers.

In the said drawings the reference numeral 1 designates the building in connection with which my improvement is employed. Brackets consisting of metal plates 2 provided with bosses 3, are secured to the building at suitable intervals by means of screws 4, which pass through a countersunk hole in each end of the plate. These brackets are located at the top of the doorway.

The numeral 5 designates the sliding door which has secured to its top edge a weather strip 6, which is inclined so as to readily shed the water which may fall thereon in rainy weather. The building is also provided with a similar strip 6^a. Secured to the inner face of the door below the weather strip are two or more bearings 7, for the anti-friction rollers 8. These bearings each consist of two horizontal metallic plates, parallel with and a short distance from each other forming a space therebetween within which said rollers are located and travel. These plates are

formed with horizontal slots 9, in line with each other to receive the journals 10, of the said rollers, which are free to work horizontally therein, as well as to have a slight vertical movement. The outer plates of these bearings have their ends bent inwardly and then horizontally so as to rest upon the ends of the inner plates and are secured to each other by rivets passing therethrough and also through an aperture in the brackets 11, which brackets are secured to the door by screw-bolts 12. The lower ends of these brackets 11, are bent outwardly at right angles forming lugs 10^a which ride along the under side of the rail upon which the rollers travel and prevent them from being thrown off the same.

Near the bottom of the door at one end thereof is a bearing 13, somewhat similar to the bearings 7, except that it is shorter and is provided with vertical slots 14, in which the journals 15 of the guide-roller 16, work.

The numeral 17 designates the lower guide rail which extends longitudinally a suitable distance the length of the building or other structure and is secured to the bosses 3^a of brackets 2^a secured to the lower part of the building by means of screws or rivets 4^a.

The numeral 18 denotes the upper rail of a length equal to rail 17, and is connected with the brackets 2 secured to the building, by means of rivets passing through apertures therein and extending into the bosses 3. The rails 17 and 18, may be made continuous or they may be made up in sections, in which latter case the meeting end of one section being formed with a V-shaped recess to receive the correspondingly pointed end of the next adjoining section.

From the foregoing the operation will be readily understood. The door is supported by means of the upper rail and the anti-friction rollers and the latter being capable of a longitudinal movement within their bearings, reduces the friction to a minimum. The lugs 10^a of the brackets 10, prevent the roller from jumping the rail. The lower roller being movable vertically, adjusts itself automatically to the lower rail. This roller 16, is simply a guide roller to prevent the lower part of the door from swinging out of align-

ment with the rail 17. When the door moves upwardly the said roller will remain in engagement with the rail by gravity.

Having thus described my invention, what I claim is—

In a sliding door, the combination with a building or other structure, of the upper and lower rails connected therewith, the upper bearings secured to the door consisting of parallel plates with aligned horizontal slots, the horizontally movable rollers having journals working in said slots, and the lower bear-

ing consisting of the two plates connected together at their ends and having aligned vertical slots, and the vertically movable guide roller journaled therein, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN R. BODELL.

Witnesses:

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C. B. EYMAN.